

## ABSTRACT

**THESIS:** IMPROVING UPON THE CURRENT MOBILE LANGUAGE LEARNING APPS AND WEBSITES, WITH A FOCUS ON THE JAPANESE LANGUAGE

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This study consisted of three methods to teach participants how to write Japanese katakana characters and evaluate their effectiveness. Previous studies have shown that the use of flashcards and stroke order methods held educational benefits when used by students when learning new writing systems. The 29-led method has been previously studied for the display of numerals and characters in different languages. In this study, the 29-led method will be used to help replicate handwriting characters as the participants can click various line segments to recreate the given katakana character. This study needs to be conducted to further improve the quality of online language learning, and to investigate to see if one method is more effective than the other in helping participants to learn to write new alphabets or characters. In order to test the three methods, a web-based tool written in HTML, CSS, and JavaScript was created. The participants would then use this tool to learn ten Japanese katakana characters, the five vowels (a, i, u, e, and o) and five k-consonants with five vowels (ka, ki, ku, ke, and ko). After learning the ten katakana characters, the participants then took two post-tests: recognition and production tests. The study took place with thirty participants who have never learned the Japanese language before and were distributed into the three methods. The ending result yielded that no method contained any significance over the other in terms of post-test results, however the flashcard method ended up yielding the largest mean post-test scores as well as the highest relative effect size. This would

indicate that the flashcard method might be the most effective among the three methods when learning to write Japanese katakana via online tools or applications.